Patent-

2007

003263.P004

Response Under 37 C.F.R. § 1.116 Expedited Procedure Examination Group 2858

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application for:

Bridges et al.

Serial No. 09/610,668

Filed: July 5, 2000

For: METHOD AND APPARATUS FOR SUB-MICRON IMAGING AND PROBING ON

PROBE STATION

Examiner: James Kerveros .

Art Unit: 2858

RESPONSE TO FINAL OFFICE ACTION UNDER 37 CFR § 1.116

Box AF Assistant Commissioner of Patents Washington, D.C. 20231

Dear Sir:

In response to the Final Office Action mailed October 18, 2001, Applicants respectfully request the Examiner to consider the following remarks.

REMARKS

Claims pending in the instant application are numbered 1-33. Claims 1-33 presently stand rejected. The Applicants respectfully request reconsideration of the present application pursuant to 37 CFR § 1.116 in light of the following remarks.

003263.P004 Serial No. 09/610,668 Examiner: James Kerveros Art Unit: 2858

35 U.S.C. § 103 Rejections

In the October 18, 2001 Final Action, claims 1, 2, 4, 6-9, 15-18, 23-27, 30 and 33, are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lindsay et al., US Patent Number 5,983,712, in view of Applicants' admitted prior art.

Present claim 1 of the Applicants' invention expressly recites a cantilever, having a tip, which is attached to a second positioning unit, which is attached to a probe arm, which is attached to a first positioning unit. A motion sensor is configured to detect motion of the cantilever. Present claim 1 expressly recites that the claimed first positioning unit is mounted onto a probe station platform of a probe station so as to provide additional probing capability to the probe station. The presently claimed probe apparatus is therefore added to a probe station that already has some probing capabilities even without the Applicants' claimed probe apparatus.

The Applicants respectfully submit that the Examiner has not made out a prima facic case of obviousness by failing to show that all the expressly recited claim limitations are taught or suggested by the prior art. MPEP § 2143.03. Lindsay simply discloses a traditional atomic force microscope including a positioning unit held in a fixed position. Lindsay, however, fails to disclose, teach, or fairly suggest a first positioning unit mounted onto a probe station platform of a probe station so as to provide additional probing capability to the probe station, as expressly recited in the Applicants' present claims. As summarized on page 7, lines 10-20, of the Applicants' specification, the presently claimed invention provides a way to preserve a user's investment in a traditional probe station. The present invention can be quickly and easily added to a traditional probe station to provide additional probing capability to improve, for example, imaging and probe placement to the sub-micron and "deep sub-micron" level and to allow low-loading electrical measurements.

003263.P004 Serial No. 09/610,668 Examiner: James Kerveros Art Unit: 2858 Independent claims 23 and 30 distinguish over Lindsay for the same reasons as claim 1. Present claim 23 expressly recites "mounting a probe apparatus to a probe station platform of a probe station so as to provide additional probing capability to the probe station." Present claim 30 expressly recites "first positioning means for coarse positioning mounted to a probe station platform of a probe station so as to provide additional probing capability to the probe station." Dependent claims 2, 4, 6-9, 15-18, 24-27 and 33 are dependent claims and distinguish for at least the same reasons as their respective independent base claims in addition to adding further limitations of their own.

Furthermore, claims 3, 5, 10-14, 19-22, 28, 29, 31 and 32 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lindsay et al. as applied to claims 1, 23 and 30 above, in further view of Hellemans et al., US Patent Number 6,091,248.

Hellemans is directed to a method for measuring the electrical potential in a semiconductor element. Hellemans describes an electrometer 10, which measures the electrical potential through probe 3 of the semiconductor device 1. Hellemans discloses in column 4, lines 45-50, that the semiconductor element 1 is mounted movable three-dimensionally with a piezocrystal 2. Thus, the force or distance of probe 3 relative to the semiconductor element 1 is adjusted or calibrated by moving the semiconductor element 1 with piezo-crystal 2.

As stated above, the Applicants respectfully submit that the Examiner has not made out a prima facie case of obviousness by failing to show all the claim limitations are taught or suggested by the prior art. Hellemans fails to disclose, teach or fairly suggest that a first positioning unit is mounted onto a probe station platform of a probe station so as to provide additional probing capability to the probe station, as expressly recited in the presently claimed invention. The Applicants further note that claims 3, 5, 10-14, 19-22, 28, 29, 31 and 32 are

dependent claims, which distinguish for at least the same reasons as their respective independent base claims in addition to adding further limitations of their own.

Accordingly, both Lindsay and Hellemans, whether taken singularly or in combination, fail to disclose, teach or fairly suggest at least one or more expressly recited elements of the presently claimed invention. Therefore, the Applicants respectfully request that the instant section 103 rejections be withdrawn and that the presently claimed invention is in condition for allowance.

The Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Charge Deposit Account

Please charge our Deposit Account No. 02-2666 for any additional fee due in this matter.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Art Unit: 2858

Date: 12-12-01	James Y. Go, Reg/No. 40,621
Customer No. 12400 Wilshire Boulevard, Seventh Floor	
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003263 P004	Examiner: James Kerveros

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Dear Examiner Kerveros,

As we discussed during our phone conversation earlier today, attached please find the Response to the Final Office Action that was timely mailed to you previously on December 12, 2001 via First Class US Mail in response to the Final Action mailed by the PTO on October 18, 2001.

Please contact me at (206) 292-8600 after your review.

Respectfully Submitted,

Reg. No.: 40,621

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Serial/Patent No.: 09/610, 668 Client: MFT Technologies Corporat	Filing/Issue Date: July 5, 20	
Tide: METHOD AND APPARATUS FOR	PROVIDING A START-UP	
CONTROL VOLTAGE		<u>.</u>
BSTZ File No.: 003263_P004	Atty/Scrty Initials: JYG/FDO	9003
Date Mailed: December 12, 2001	Docket Due Date: December 1	D. ZUUL
The following has been received in the U.S. Patent &	Frademark Office on the date stamped hereo	n:
Amendment/Response (4_pgs.)		Zheck No
Appeal Brief (pgs.) (in triplicate)	☐Month(s) Extension of Time A	Lmt:
Application - Utility (pgs., with cover and abstract)	☐ Information Disclosure	
Application - Rule 1.53(b) Continuation (pgs.)	Smrement & FTO-1449 (pgs.)	heck No
Application - Rule 1.53(b) Divisional (pgs.)	☐ Issue Fee Transmittal	lmt:
Application - Rule 1.53(b) CXP (pgs.)	☐ Notice of Appeal	
Application - Rule 1.53(d) CPA Transmittal (pgs_)	☐ Petition for Extension of Time	
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Application - Provisional (pgs.)	☐ Power of Attorney (pgs.)	
Assignment and Cover Sheet	Preliminary Amendment (pgs.)	
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	Applicant(s) hereby Petition(s) for a 37 C.F.R. § 1.136(a).	an Extension of Time of month(s) pursuant to
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